

# Fact Sheet

# Biological

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# FEMA

Biological agents are organisms or toxins that can kill or incapacitate people, livestock and crops. The three basic groups of biological agents that would likely be used as weapons are bacteria, viruses and toxins. Most biological agents are difficult to grow and maintain. Many break down quickly when exposed to sunlight and other environmental factors, while others, such as anthrax spores, are very long lived. Biological agents can be dispersed by spraying them into the air, by infecting animals that carry the disease to humans and by contaminating food and water.

## Know Your Risk and What to Do

- Contact your local emergency management office to learn about community emergency plans and what you should include in yours.
- Get additional information from the U.S. Department of Homeland Security ([www.ready.gov](http://www.ready.gov)), the American Red Cross ([www.redcross.org](http://www.redcross.org)) and the Centers for Disease Control and Prevention ([www.bt.cdc.gov](http://www.bt.cdc.gov)).
- Inquire about emergency plans and procedures at your child's school, at your workplace and at any institution where a member of your family is resident or receives care on a regular basis.
- Make a family disaster plan that includes out-of-town contacts and locations to reunite if you become separated. Be sure everyone knows home, work and cell phone numbers, and how to call 9-1-1.
- Assemble a 3-day disaster supplies kit with food, water, medical supplies, battery-powered radio and NOAA Weather Radio All Hazards, batteries, flashlights, and other items. For more information about assembling a disaster supplies kit, visit [www.fema.gov/areyouready/](http://www.fema.gov/areyouready/).
- Put important documents such as birth and marriage certificates, social security cards, passports, wills, deeds, and financial and insurance records in a fire- and water-safe location or safe deposit box.

## Before a Biological Attack

- Check with your doctor to ensure all immunizations are up to date. Children and older adults are particularly vulnerable to biological agents.
- Consider installing a High Efficiency Particulate Air (HEPA) filter in your furnace return duct. These filters remove particles in the 0.3 to 10 micron range and will filter out most biological agents that may enter your house. If you do not have a central heating or cooling system a stand-alone portable HEPA filter can be used.

## Filtration in Buildings

- Building owners and managers should determine the type of filtration in their structures and the protection it provides against biological agents. Obtain a copy of *Guidance for Filtration and Air-Cleaning Systems to Protect Building Environments from Airborne Chemical, Biological, or Radiological Attacks* by calling 1-800- 35NIOASH or visit [www.cdc.gov/NIOSH/publist.html](http://www.cdc.gov/NIOSH/publist.html) and request or download NIOSH Publication 2003-136.

## During a Biological Attack

- Even if public health officials know an attack has occurred, they may not immediately be able to provide information on what you should do. It will take time to determine what the illness is, how it should be treated, and who is in danger.
- The first evidence of an attack may be when you notice symptoms of the disease. Be suspicious of any symptoms you notice, but do not assume that any illness is a result of the attack. Use common sense and practice good hygiene.

## If there has been an attack:

- Watch television, listen to radio, or check the Internet for official news and information including signs and symptoms of the disease, areas in danger, if medications or vaccinations are being distributed, and where you should seek medical attention if you become ill.

If there has been an attack (continued):

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If you become aware of an unusual and suspicious substance nearby:

- Move away quickly.
- Wash with soap and water.
- Contact authorities.
- Listen to the media for official instructions.
- Seek medical attention if you become sick.

If you are exposed to a biological agent:

- Remove and bag your clothes and personal items. Follow official instructions for disposal of contaminated items.
- Wash yourself with soap and water and put on clean clothes.
- Seek medical assistance. You may be advised to stay away from others or even be quarantined.

Using HEPA Filters

- If you have a central heating and cooling system in your home with a HEPA filter, leave it on if it is running or turn the fan on if it is not running. Moving the air in the house through the filter will help remove the agents from the air. If you have a portable HEPA filter, take it with you to the internal room where you are seeking shelter and turn it on.
- If you are in an apartment or office building that has a modern, central heating and cooling system, the system's filtration should provide a relatively safe level of protection from outside biological contaminants.
- HEPA filters will not filter chemical agents.

### After a Biological Attack

- In some situations, such as the case of the anthrax letters sent in 2001, people may be alerted to potential exposure. If this is the case pay close attention to all official warnings and instructions on how to proceed.
- Medical services during a biological event may be handled differently to respond to increased demand.
- The basic public health procedures and medical protocols for handling exposure to biological agents are the same as for any infectious disease.
- Pay attention to official instructions via radio, television, and emergency alert systems.
- Visit <http://www.bt.cdc.gov/bioterrorism/> to learn more about biological agents and other important information.

### The Recovery Process

- For direct assistance to individuals' and families' immediate needs contact the American Red Cross or other local voluntary agencies.
- Check newspapers, television, or radio news for information on disaster assistance available.
- For information on helping children deal with disaster, visit [www.fema.gov](http://www.fema.gov) or get a copy of FEMA 478 **Helping Children Cope with Disaster**. To obtain other fact sheets and publications call the FEMA Distribution Center at 1-800-480-2520.

Dangerous Bioterrorism Myth!	The Facts:
<b>News and entertainment media have shown public fear and panic as people try to get a smallpox vaccination when supplies are limited.</b>	After the events of September and October, 2001, the U.S. government took actions to improve its level of preparedness against terrorism. The U.S. government now has enough smallpox vaccine to vaccinate every person in the United States in the case of a smallpox emergency.